Page 2

Election of Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original) An inductor comprising:

a nonconductive, tubular form having an outer surface and defining a tube axis, said outer surface formed with a groove extending substantially helically about said tube axis; and

a coiled wire formed with a plurality of turns for passing an electrical current therethrough, said wire being wound around said form with at least a portion of said wire disposed in said groove to maintain a predetermined separation between adjacent turns during a generation of magnetic forces created by electrical currents passing through said wire.

- 2. (Original) An inductor as recited in claim 1 wherein said form is made of an epoxy glass composite.
- 3. (Original) An inductor as recited in claim 1 wherein said groove has a substantially rectangular shaped cross-section.

Page 3

4. (Original) An inductor as recited in claim 1 further comprising a means for

cooling said wire.

5. (Original) An inductor as recited in claim 4 wherein said cooling means

comprises:

a shroud for establishing a volume with at least a portion of said wire

positioned in said volume; and

a fan for passing air through said volume to cool said wire.

6. (Original) An inductor as recited in claim 1 wherein said wire extends from

a first end to a second end and said inductor further comprises a first clamp mounted on

said form for clamping said first end and a second clamp mounted on said form for

clamping said second end.

7. (Original) An inductor as recited in claim 6 wherein said tube is formed

with a cylindrical inner surface; said inner surface is distanced from said tube axis by a

radial distance, R; said first end is clamped by said first clamp at a first clamping point

distanced from said tube axis by a radial distance, r, with r > R.

8. (Original) An inductor as recited in claim 7 further comprising a saddle

made of a non-magnetic material for mounting said first clamp to said form.

Page 4

9. (Original) An inductor as recited in claim 8 wherein said saddle is made of a stainless steel.

10. (Original) An inductor as recited in claim 8 further comprising an insulating member affixed to said saddle for attaching said saddle to a mounting plate.

11. (Original) An inductor comprising:

a coiled wire formed with a plurality of turns for passing an electrical current therethrough; and

a form having a wall formed with a groove extending partway through said wall, with said wire being disposed in said groove to at least partially expose said wire to a volume surrounding said form to cool said wire, said groove being dimensioned for holding said wire to maintain a predetermined separation between adjacent turns during a generation of magnetic forces created by electrical currents passing through said wire.

- 12. (Original) An inductor as recited in claim 11 wherein said form is substantially tubular shaped and made of a nonconductive material.
- 13. (Original) An inductor as recited in claim 12 wherein said groove has a substantially rectangular shaped cross-section.

Page 5

14. (Original) An inductor as recited in claim 13 further comprising:

a shroud for establishing a volume with at least a portion of said wire positioned in said volume; and

a fan for passing air through said volume to cool said wire.

- 15. (Original) An inductor as recited in claim 14 wherein said wire extends from a first end to a second end and said inductor further comprises a first clamp mounted on said form for clamping said first end and a second clamp mounted on said form for clamping said second end.
- 16. (Original) An inductor as recited in claim 15 wherein said tube is formed with a cylindrical inner surface; said inner surface is distanced from said tube axis by a radial distance, R; said first end is clamped by said first clamp at a first clamping point distanced from said tube axis by a radial distance, r, with r > R.
- 17. (Original) An inductor as recited in claim 16 further comprising a saddle made of a non-magnetic material for mounting said first clamp to said form.

Page 6

18. (Withdrawn) A method for manufacturing an inductor, said method comprising the steps of:

providing a nonconductive, tubular form having an outer surface and defining a tube axis;

forming a groove in said outer surface, said groove extending substantially helically about said tube axis; and

winding a wire around said form with at least a portion of said wire disposed in said groove to maintain said wire in a predetermined shape during a generation of magnetic forces created by electrical currents passing through said wire.

19. (Withdrawn) A method as recited in claim 18 further comprising the steps of:

providing a shroud for establishing a volume;
positioning at least a portion of said wire in said volume; and
circulating a fluid in said volume to cool said wire.

20. (Withdrawn) A method as recited in claim 19 further comprising the step of clamping an end of said wire to said form.